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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,465	01/27/2004	Ling Ma	IR-2444 CIP (2-3869)	3194
2352	7590	09/06/2006	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			KIM, SU C	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/766,465

Applicant(s)

MA ET AL.

Examiner

Su C. Kim

Art Unit

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 21 August 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See attached page(s). (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1 and 4-10.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
13. ☒ Other: See attached page(s).


**BROOK KEBEDE
PRIMARY EXAMINER**

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Continuation Sheet (PTO-303)

Advisory Action

1. On cursory consideration, the request for reconsideration and the proposed amendment, which has not been entered, does not clearly appear to overcome the rejections.

Response to Arguments

2. The claim objection on claim 1, the examiner now understands “microns” as micrometer. Therefore previous objection on claim 1 has been withdrawn.

3. Applicant's arguments filed 8/21/2006 have been fully considered but they are not persuasive.

With respect to claims rejection under 35 U.S.C. 103(a), applicant argues “Zeng does not specify that its figures are drawn to scale. Therefore it is improper to assert that Zeng discloses a field oxide that is thicker than the gate oxide.”

In response to applicant's contention, it is respectfully submitted that Williams (US 2002/0019099) in view of Zeng (US Pub 2003/0205758) discloses all the claimed limitation including “a field oxide layer that is thicker than the gate oxide” as recited in claims 1

Zeng appears to show, see Fig. 15, a field oxide layer (340) is thicker than a gate oxide layer (40), i.e., Although the drawings may not be drawn to scale it is reasonable to infer relative sizes of elements depicted. Therefore, depiction

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of the field oxide thicker than the gate oxide is reasonable evidence of the thickness of the field oxide being greater than the thickness of the gate oxide.

Furthermore, "a field oxide layer that is thicker than gate oxide layer," has no supporting evidence of thickness on field oxide layer and gate oxide layer in specification other than thick field oxide

Also, The examiner can not define field oxide layer is thicker than gate oxide layer without actual thickness of field oxide layer and gate oxide layer in the specification and may raise new matter.

Applicant also argues " Zeng does not disclose how to form the oxide layer in its termination, and thus cannot teach a skilled person to modify Williams to obtain an oxide of a different thickness in the termination trench the recode lacks prima facie evidence to render claim1 obvious."

In response to applicant's contention, William teaches forming gate oxide and field oxide layer in Fig. 2

William teaches termination region with field oxide layer in Fig. 24 (I).

Zeng teaches termination structure with field oxide layer is thicker than gate oxide layer. Since the function of field oxide is a insulation which "protect semiconductor surface outside of active device area" and the function of gate oxide layer is which serves as insulator between the gate and channel, should be made as thin as possible to increase the channel conductivity and performance when the transistor is on and to reduce subthreshold leakage when the transistor is off (**See** semiconductor Glossary

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thickness of gate (1nm-70nm), thickness of field oxide (100-500nm)), it is well known in the art field oxide layer is thicker than gate oxide layer.

Therefore, the rejection of claim 1 under 35 U.S.C. 103(a) is deemed proper.

In addition, for the rejection of claim 4-10, the *prima facie* case of obviousness has been met and the rejection under 35 U.S.C. § 103 is deemed proper.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Su C. Kim whose telephone number is (571) 272-5972. The examiner can normally be reached on Monday - Thursday, 9:00AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Su C. Kim


BROOK KEBEDE
PRIMARY EXAMINER